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NACo BUILDING RESILIENT ECONOMIES *in* COAL COMMUNITIES

Economic Transition Strategies from Coal Communities Across the Globe

February 1, 2024

NACo NATIONAL ASSOCIATION of COUNTIES | BUILDING RESILIENT ECONOMIES *in* COAL COMMUNITIES

TODAY'S AGENDA

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04
Q+A

NATIONAL ASSOCIATION of COUNTIES NACo

BUILDING RESILIENT ECONOMIES *in* COAL COMMUNITIES

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THE OECD MINING REGIONS AND CITIES INITIATIVE

1. Context
2. Characteristics of mining regions
3. Coal transition framework and experiences

OECD's work on Rural and Regional Development

"Across the OECD, rural regions make up 80% of all the territory and are home to 30% of the population"

"Rural places are sources of wealth and opportunity to mobilise endogenous assets and increase people's well-being"

The Well-being rural framework

Rural Innovation

Indigenous communities in regional development

Demographic change

Rural climate agenda

Rural Manufacturing

Mining Regions

OECD Mining Regions and Cities Initiative

Improve development outcomes and well-being in regions and cities specialised in mining:

1. Global toolkit with evidence and good practices to benchmark across economic, environmental, and social metrics.

2. Case studies that deliver regional specific support to implement better regional development policies

3. Annual mining regions conference and peer-review activities to enable knowledge sharing.

OECD Mining Regions and Cities initiative

Conferences

- Antofagasta, Chile (2017)
- Darwin, Northern Territory, Australia (2018)
- Skellefteå, Västerbotten, Sweden (June) (2020)
- Karratha, Australia (2022)
- Greater Sudbury, Canada (2024)
- Lapland, Finland (tbc) (2025)

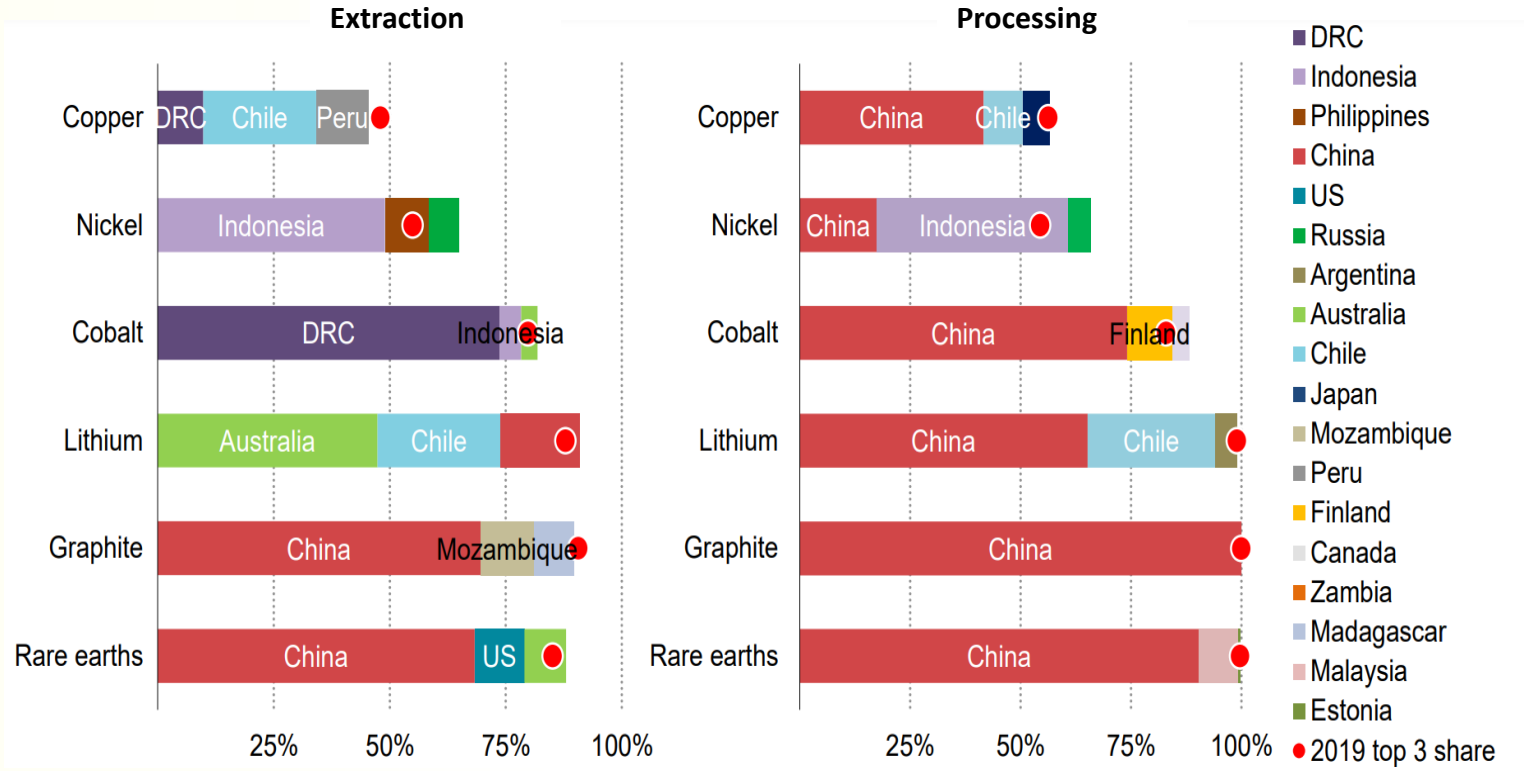
Studies

- North Karelia, Finland (2018)
- Västerbotten & Norrbotten, Sweden (2020)
- Andalucía, Spain (2021)
- Statistical toolkit on well-being (2022)
- Pilbara, Australia (2023)
- Antofagasta Chile (2023)
- Northern Ontario, Canada (2024)
- Toolkit (policy and data) (2025)
- 10 EU mining regions (2025)

2017 2018 2019 2020 2021 2022 2023 2024 2025

Surging global metallic mineral demand amid market concentration

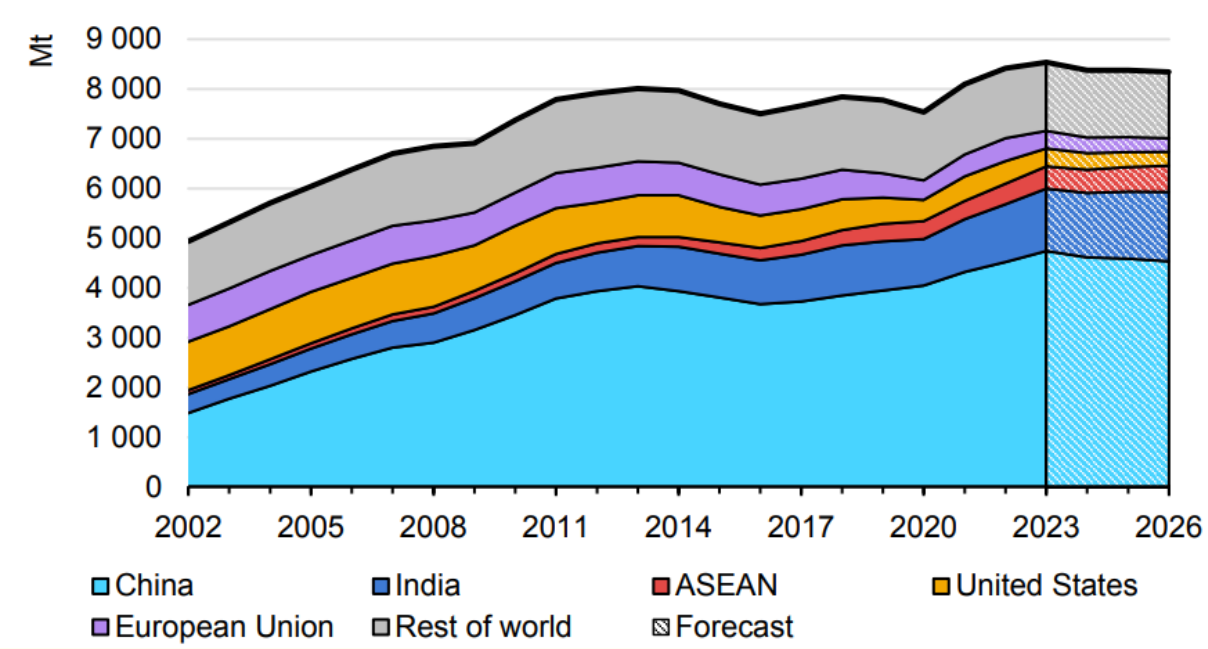
Share of the top three producing countries of selected minerals, 2022



Source: IEA (2022), World Energy Outlook,

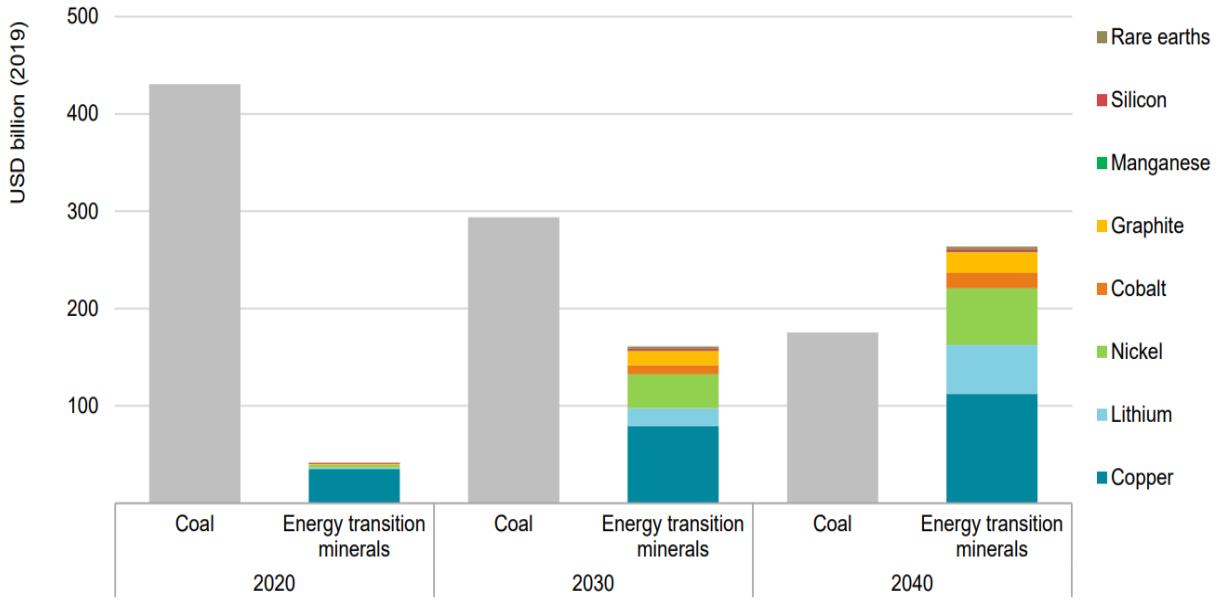
Increasing pressure to transition away from coal .

Global coal consumption, 2002-2026



Source: IEA 2023, Coal 2023 Analysis and forecast to 2026

Revenue from production of coal and selected energy transition minerals



Source: IEA (2022), World Energy Outlook

Even in the absence of government climate policies, global coal consumption in 2026 is set to be 2.3% lower than in 2023

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Mining is geographically concentrated, which shapes local development and mineral supply

High Salaries, jobs, local revenues

Community and technology infrastructure

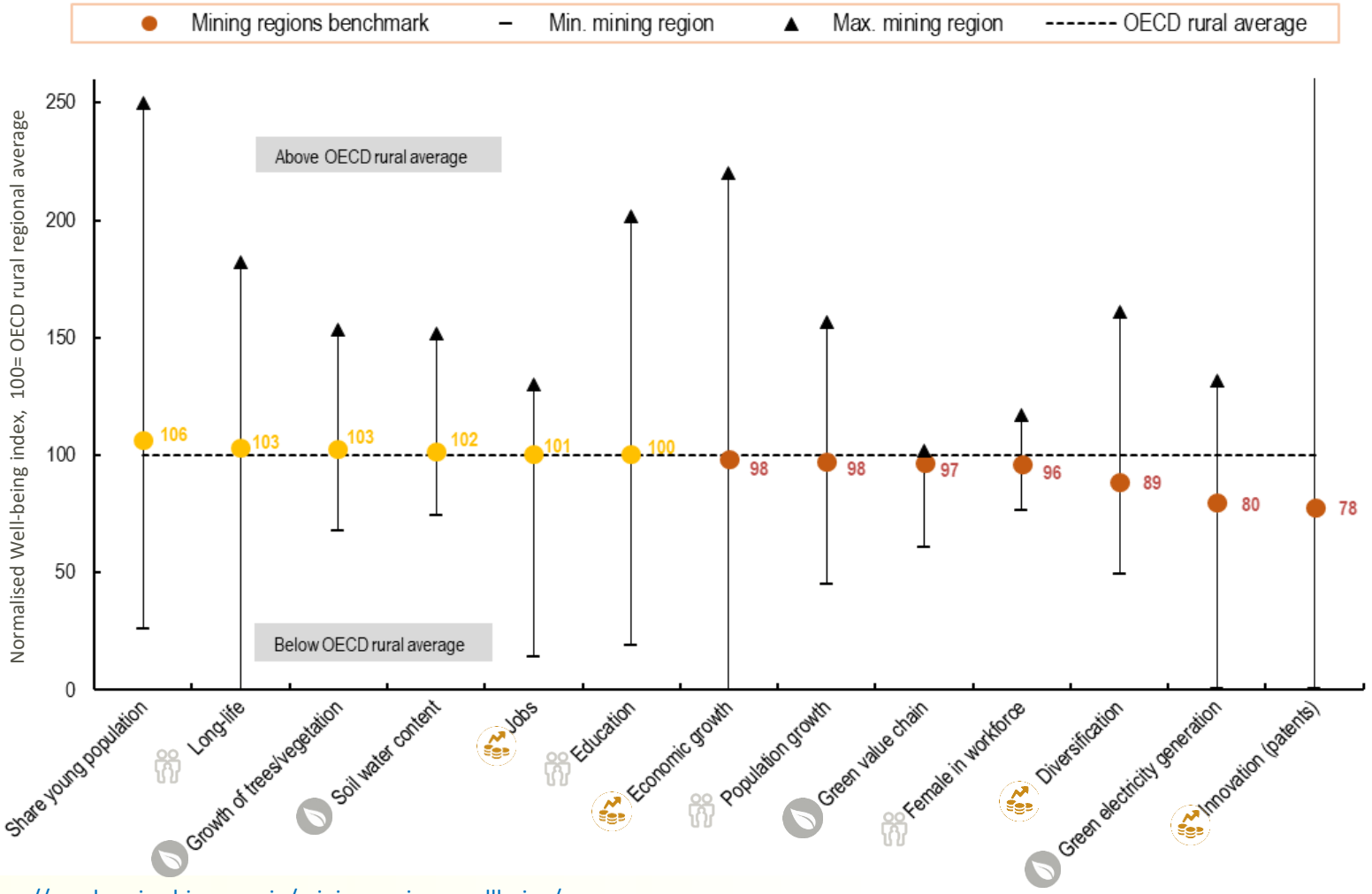
Support green technologies and phasing out fossil fuels

Lock-in effects, volatility, income inequalities.

FIFO workers, gender imbalance, labor shortage for public services

Air pollution, land use change, water usage and biodiversity loss

Measuring well-being characteristics in mining regions

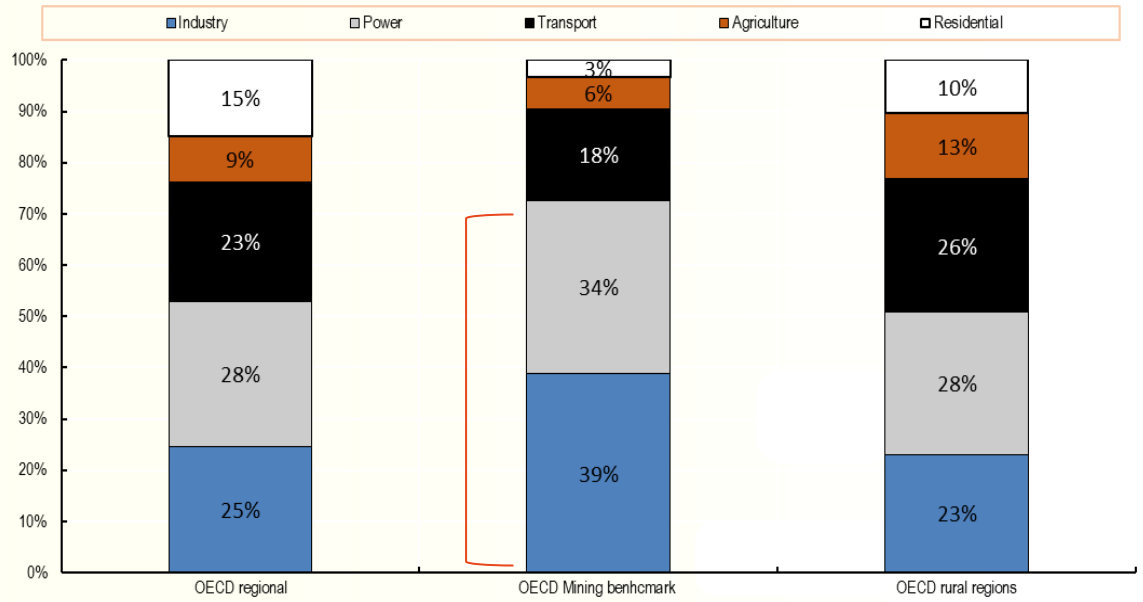


	OECD mining regions	OECD rural regions
Population average	291,870	271,993
Population density, average	75.2	119.9
Regional surface (km2), average	101,768	18,829
Working age population, average	63.8%	63.0%
Green land cover (%of regional land)	62.4%	57.5%

https://oecd-main.shinyapps.io/mining-regions-wellbeing/

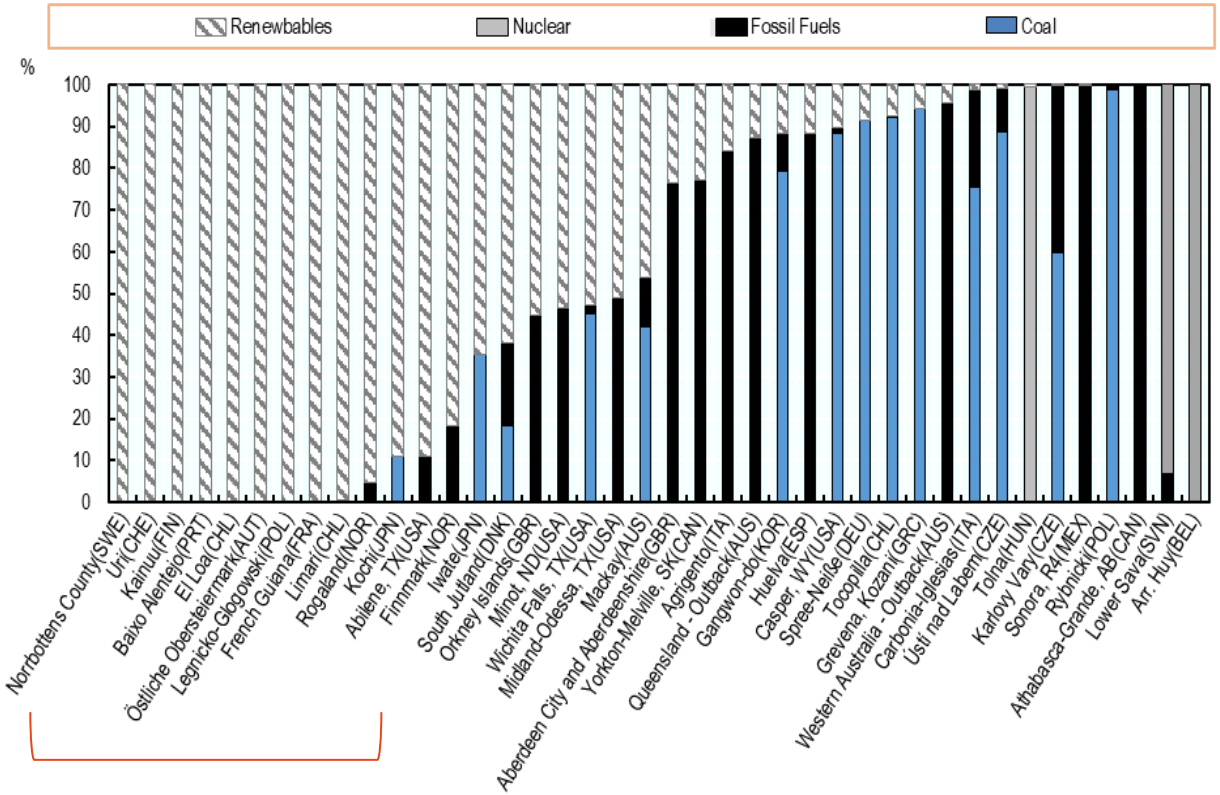
Greater GHG emissions per capita, but with some regions sourcing all energy from renewables

Sectorial contribution to GHG emission, OECD regional average and OECD mining regions benchmark (2018)



GHG emissions pc of OECD mining regions: 4x higher than the emissions of OECD regions and **3x higher** than the emissions of OECD rural regions

Source of electricity generation in OECD mining regions, 2019



Megatrends impacting mining regions and cities.

	Opportunities (selected)	Challenges (selected)
Demographic changes	• **Migrants' integration in** labour supply. • **Lifelong learning** for old workforce to keep adding-value.	• **Shortage of labour** from local demographic decline. • **Reduction of cultural activities** from youth out-migration • Higher **pressure to local finances**.
Climate change and environmental pressures	• **Competitive advantage** from high environmental standards in mining • **New jobs** from the development of environmentally friendly technologies.	• **Pressures** to reduce mining **environmental footprint**. • **Strict policies** to issue permits to operate • **Public reluctance** to accept mining explorations and opening
Technological innovation	• **Compensate for shortage of labour**. • **Enhance attractiveness** of mining regions (e-services). • **Raise productivity** with environmentally friendly processes • Greater **labour opportunities for youth, women** and various segments of the population	• **Displacement of certain jobs** in mining sector. • **Impact competitiveness** if technological innovation is produced outside the region. • **Reduce the need for certain minerals** from laboratory products or recycling processes

Source: OECD (forthcoming), OECD Mining Regions Case Study: Västerbotten And Norrbotten, Sweden

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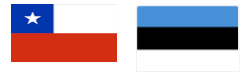
Sharing Best Practices from OECD Mining Regions

Renewable energy	Tourism	Manufacturing	Multiple diversification
Solar or Wind energy cluster: Kozani or Megalopol [1Gw] (GR), Wind energy cluster suin Verdal (NOR) 	**Natural park and outdoor activities**, Atikokan (CA), 	Industrial park and hub for mining supply chain, Outokumpu (FI) 	Fund for diversification: Entrepreneurship- Antofagasta (CHL), Agriculture- Ida-Virumaa 
Renewable energy hub: Hydro & Solar facility, Newcastle (AUS), Coal communities of the Future (US) 	**Museum** on: -Mining: Saleska (SLV), Saggrenda (NOR). Zonguldak (TUR), Germany (6) -Non-mining: Le2ns, (FR) 	Investment in infrastructure and FDI attraction to transition to manufacturing, South Wales, UK 	**Services for mining sector and re-mining**: Castilla y Leon (SP)- Training for mining providers, Lohja- Tytyri (FI)- industrial testing and 
Others: Geothermal [Seaham Garden Village- UK], **storage facility** [Andorra- SP] or Hydrogen [Pilbara-AUS] 	**Venue for multi-events:** South Gippsland, (AUS), Cundinamarca (COL), [COP24 and WUF] Katowice, (PL) 	HunterNet manufacturing cluster to upscale local businesses, Hunter Valley (AUS) 	Transition towards knowledge- based economy through holistic approach, Ruhr (GER) 

Renewable energy: Pilbara, Australia Australia and Verdal, Norway

Pilbara, Western Australia [From Iron ore to Renewables]

- Western Australian Renewable Hydrogen Strategy and Roadmap to support the vision of making WA a significant producer, exporter, and user of renewable hydrogen
- Leveraging in major companies releasing renewable energy project plans
- Increasing Indigenous co-ownership of renewables projects

Verdal, Norway [From Oil&Gas towards Wind]

- Two phases of transition during 10 years: 1st -Industrial municipal plan:
  - Comprehensive training programme aimed at laid-off workers
  - Entrepreneurial support to attract new firms into an Industrial Park
  - Infrastructure (ICT)
- 2nd : new networks and national funding to the Wind cluster Mid-Norway project

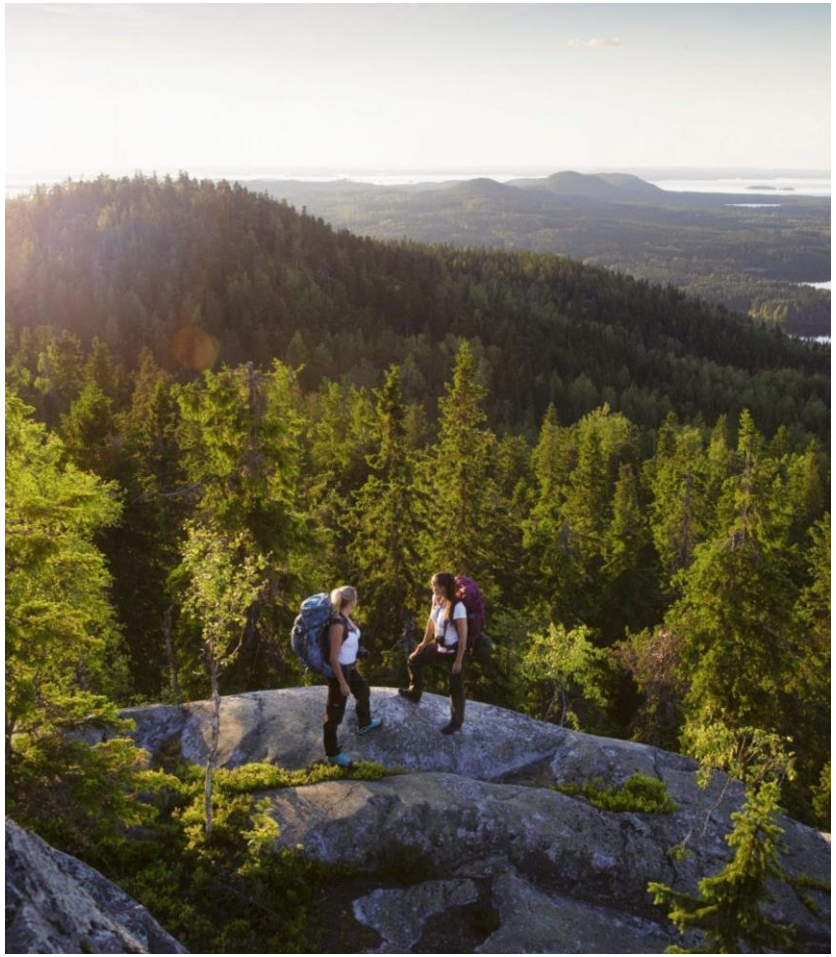
Manufacturing: North Karelia, Finland

Long-term transition to manufacturing associated with the closure of a major copper mine

- Reliance on mining created low levels of entrepreneurship
- Remoteness- bottleneck to leverage mining infrastructure for diversification
- Structural ageing

- Upskilling mining skills with contemporary economic needs
- Multi-level government collaboration: Industrial park and Geological institute
- Public-private planning: transition into manufacturing

New equilibrium with smaller population, but higher value-added jobs.



Antofagasta: a mining strategy for well-being

Important considerations in developing a regional mining strategy:

- Link mining development with **local-wellbeing**
- Materialise **previous and current initiatives**
- Ensure **governing mechanisms** to monitor progress
- Establish an accessible **channel of communication** and involvement of regional stakeholders
- Specific projects- Diversification fund

Governance Mechanism Framework

Governor		**Actions**
Executive Secretary of the Strategy		**Coordinate meetings of the steering committee, minutes, assign tasks**
Steering Committee	**Multistakeholder Committee** Representatives from the Regional Government, private sector (big and medium size mining companies, providers), Academia, Civil society (COSOC), Indigenous peoples, CORE.	**Prioritise projects, monitoring, propose new orientation**
Technical Committee	**Technical team from the Regional government** Ad-hoc request for support from private and academic sectors.	**Update on budget/ implementation. Analyse projects.**

Key considerations in the transition from coal

Anticipatory-long term planning

Public-private collaboration

Funding

Participatory planning

Proper and safe mining closure

Experimentation-entrepreneurship

Building on local assets

Establish enabling factors: skills, connectivity (networks and infrastructure), public services

Thank you

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www.oecd.org/fr/regional/mining-regions-cities.htm

Twitter: @OECD_local
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Website: www.oecd.org/cfe
Blog: oecdcogito.blog

OECD

Silesian Voivodeship

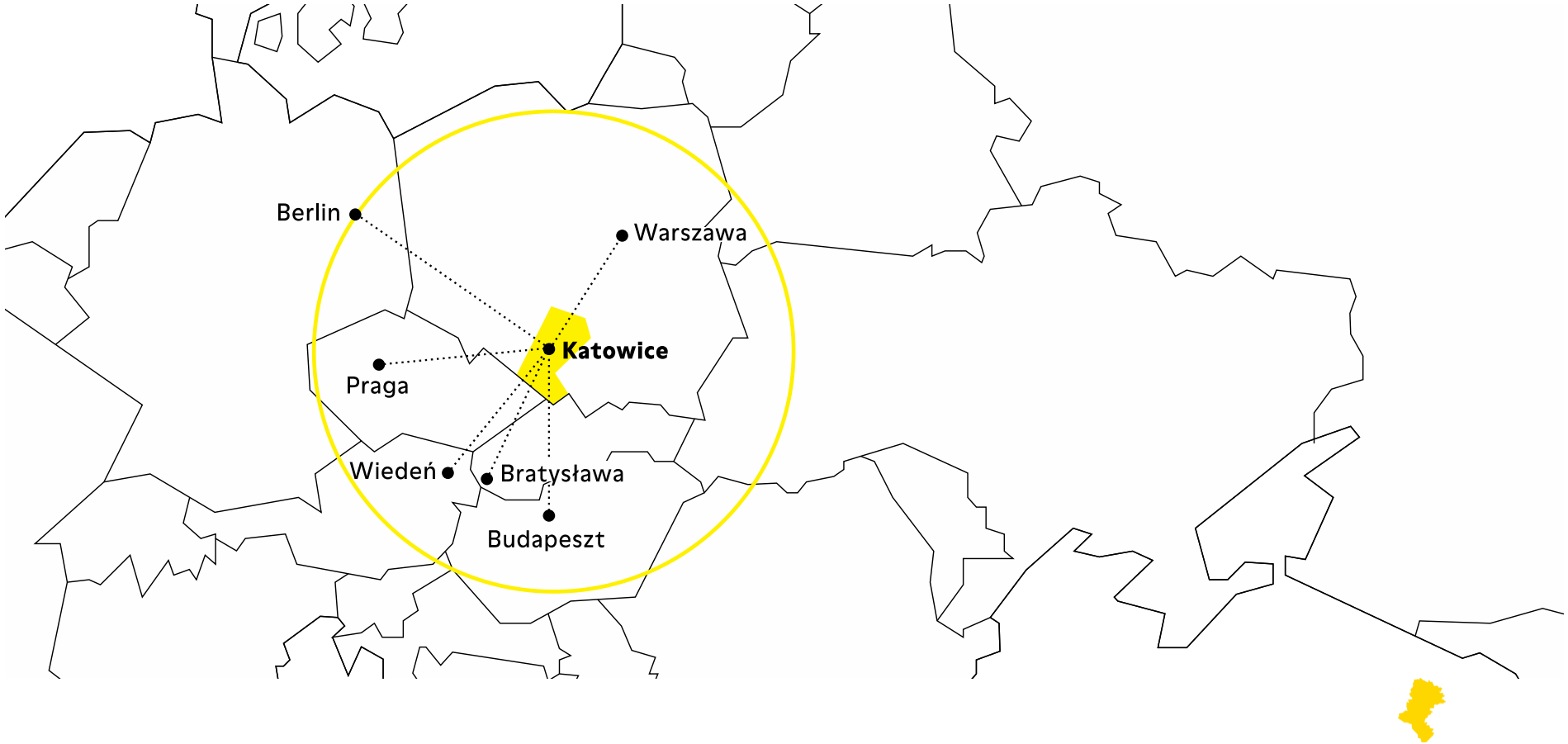
Dariusz Stankiewicz

Transition Head Specialist, Regional Authorities of the Silesian Voivodeship, Poland

SILESIAN TRANSITION - CHALLENGES FOR THE FUTURE

GATEWAY TO THE EUROPEAN MARKET

Six European capitals within a 600-km radius from the region's capital



IMPORTANT DOMESTIC MARKET

AREA 12 333 km^2 – 4% of Poland

POPULATION 4.5M – 2nd place in Poland

URBANIZATION RATE 77% – 1st place in Poland

12 % of PL GDP – 2nd place in Poland
510 000 ENTERPRISES
– 10,6 % of all Polish companies operate in the Silesian Voivodeship

COAL TRANSITION IN SILESIA

INDUSTRIAL CHANGE LAST 50 YEARS SCALE
Silesia – over 30 years of transition

✓ number of mines

✓ number of miners

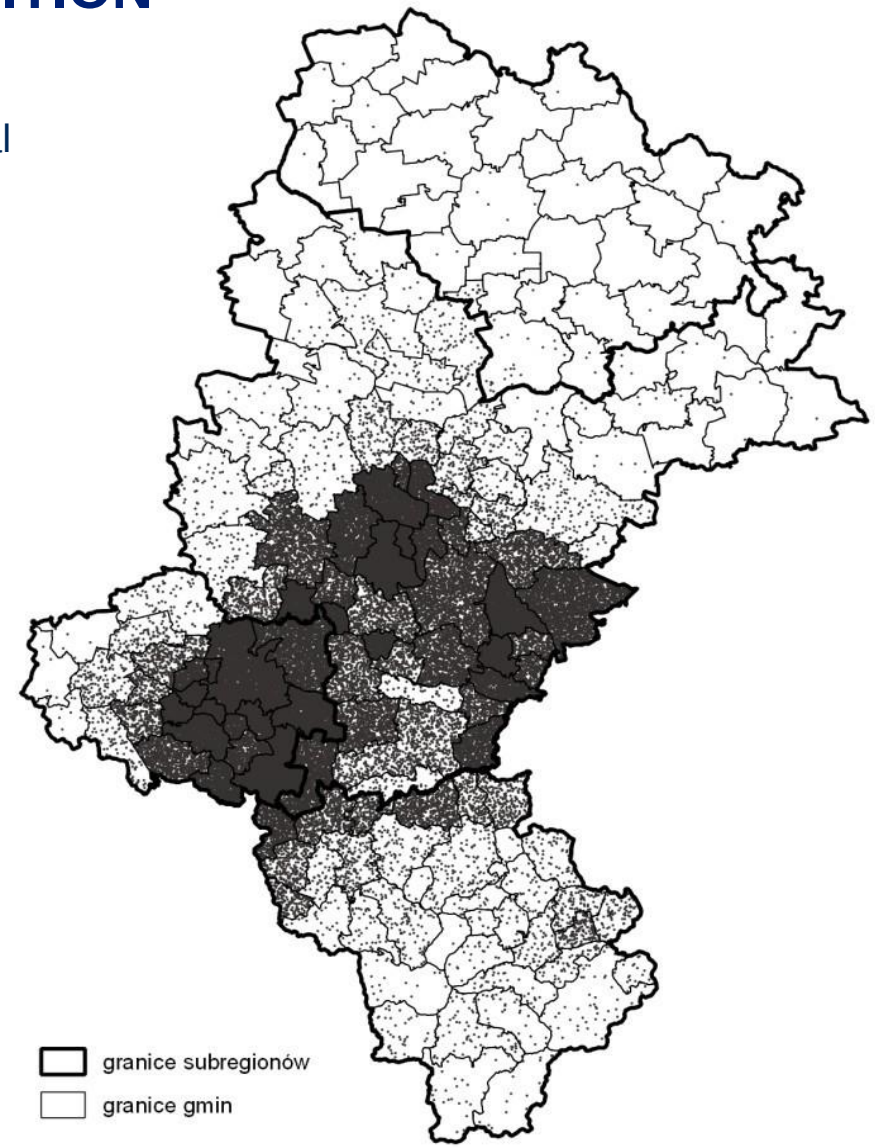
✓ number of plants that are particularly burdensome for air quality

✓ particulate pollution (in thousand tons)

inSilesia

IMAGE OF SILESIAN COAL TRANSITION

- Almost 80% of those employed in Polish coal mines come from Silesia, which also stands for 43% of total EU coal industry employment in the mining industry! (63 thousand people)
- Mining jobs are highly, geographically concentrated
- 120 thousand people employed in mining-related industries
- By 2030, it will be necessary to provide 36,5 thousand of new jobs, including almost 24,2 thousand for those from mining-related industries
- The energy transition will entail reduction in use of coal for the production of electricity and heat, the shutdown of power units and their replacement with modern, environmentally friendly infrastructure, including the development of RES



PILLARS OF SILESIAN COAL TRANSITION

- Silesian Development Strategy GREEN SILESIA 2030
- Regional Innovation Strategy 2030 – Intelligent Silesia
- Spatial Development Plan for the Silesian Voivodeship 2020+
- Territorial Just Transition Plan

THE DEVELOPMENT STRATEGY OF THE SILESIAN VOIVODESHIP „ŚLĄSKIE 2030”

Green Silesia 2030

STRATEGIC OBJECTIVE A:

THE SILESIAN VOIVODESHIP AS A REGION OF RESPONSIBLE ECONOMIC TRANSFORMATION

STRATEGIC OBJECTIVE B:

THE SILESIAN VOIVODESHIP AS AN INHABITANT-FRIENDLY REGION

STRATEGIC OBJECTIVE C:

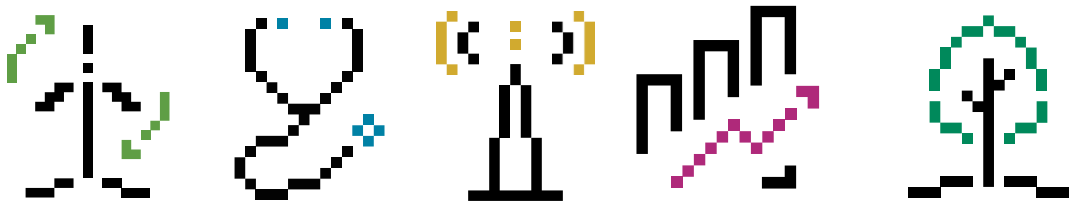
THE SILESIAN VOIVODESHIP AS A REGION WITH HIGH QUALITY OF ENVIRONMENT AND SPACE

STRATEGIC OBJECTIVE D:

THE SILESIAN VOIVODESHIP AS AN EFFICIENTLY MANAGED REGION

SMART SPECIALIZATIONS

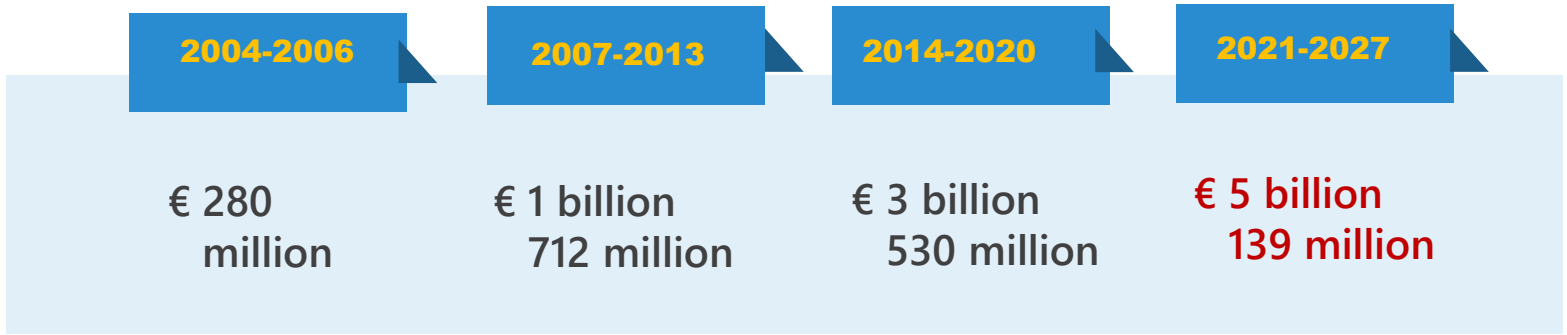
- Energy
- Medicine
- Information and communication technologies
- Emerging industries
- Green economy



INCLUSIVE POLICY – REGIONAL JUST TRANSITION COUNCIL OF THE SILESIAN VOIVODESHIP

- 63 representatives of government, self-gov, business, NGOs, Trade and academia
- Project identification proces
- Monitoring of the projects implementation progress
- Coordination of the transition partners

EUROPEAN FUNDS FOR SILESIA since 2004



EF for Silesia 2021-2027

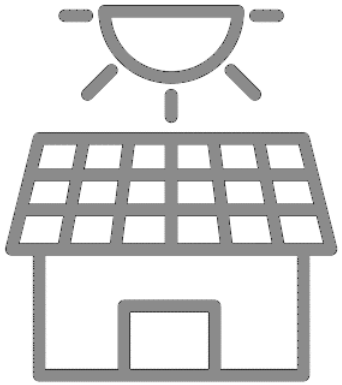
- Approved by the European Commission on December 5, 2022
- **The Just Transition Fund** makes a significant contribution to the program
- Total amount of EU support - EUR 5,139,119,473, including:
  - ERDF: EUR 2,092,328,592
  - ESF+: EUR 829,921,892
  - **JTF: EUR 2,216,868,989**

THE EUROPEAN JUST TRANSITION FUND FOR SILESIA

EUR 2,128B

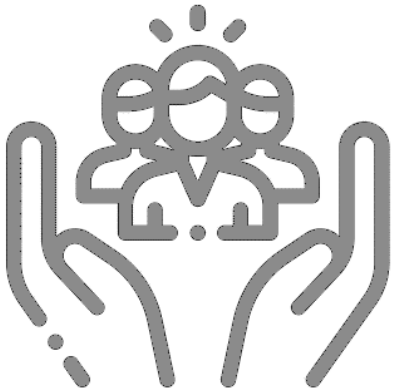
Economy
Euro 845M

- **Building** the position of a leading innovation center
- **Redirecting** the economy to green, resource-efficient, energy-efficient and digital growth.
- **Strengthening** the potential and creativity of local entrepreneurship to create alternative jobs



Environment
Euro763M

- **Accelerate** the RES energy
- **Repurposing** of post-industrial areas to social, economic and environmental reuse
- **Development** of zero-emission transport and transport cohesion



Society
Euro 520M

- **Development** and adjustment of education at all levels
- **Maintaining** economic activity of people employed in mining sectors
- **Improving** the quality of life in mining sub-regions
- **Strengthening** the potential for implementation of just transition

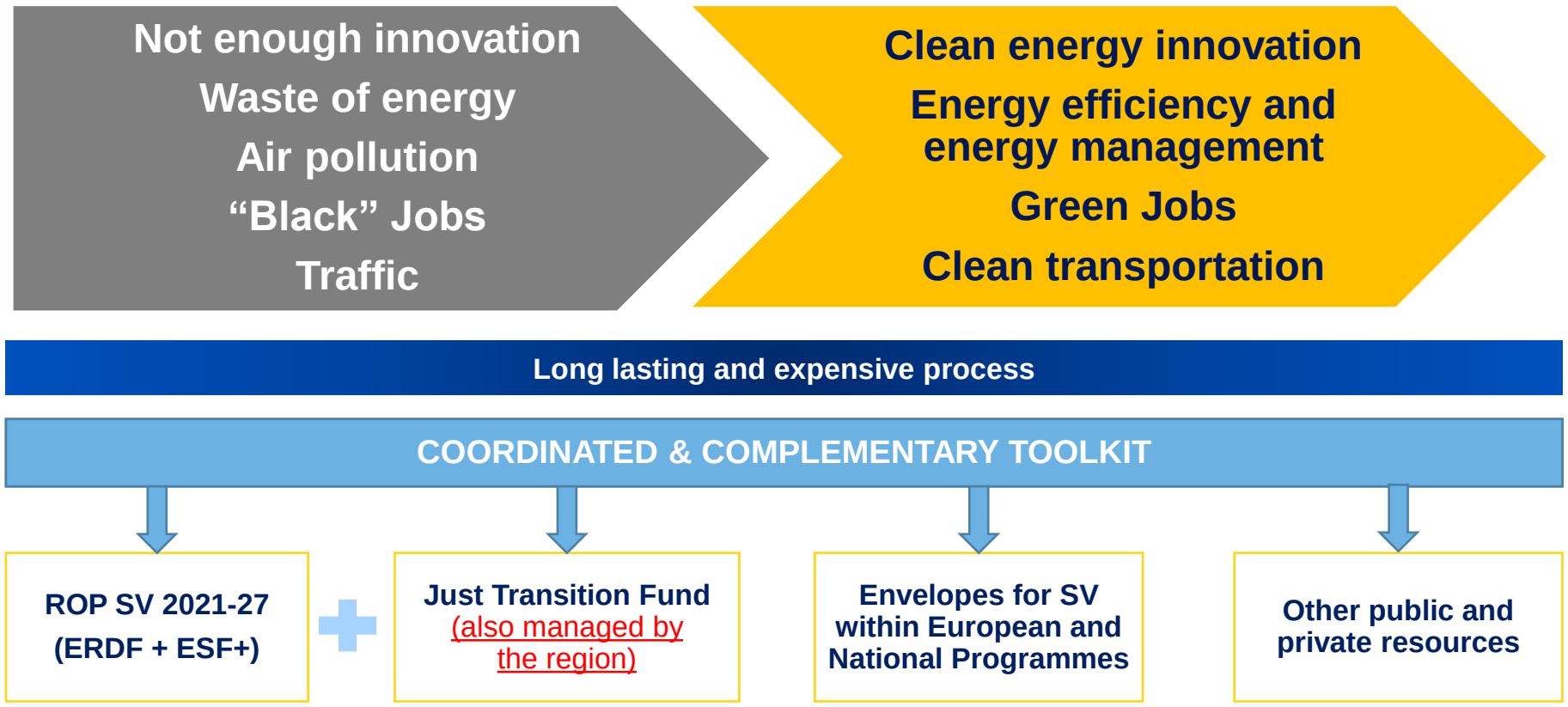
CHALLENGES OF TRANSITION IN SILESIA

- re-use of post-industrial areas for investment purposes (brownfield type)
- increasing the absorption rate of innovative solutions
- strenghtening competitive advantages
- reindustrialization
- innovativeness stimulation, supporting ris

- reduction of accumulation of negative phenomena of a social nature
- ensuring high quality space and environment
- high quality public services development
- improvement of functional connections in the region

- high quality of education
- raising qualifications and improving professional activity
- stimulating social innovativeness (or social innovations)
- counteracting the negative effects of demographic processes

ADDRESSING CHALLENGES OF TRANSITION IN SILESIA



Fundusze Europejskie

MAJOR PRE-JTF PROJECTS - EXAMPLES

CULTURE QUARTER IN KATOWICE

Former hard coal mine **Katowice** (1822-1999)

EU contribution: **€ 51.32m**

Yearly, the museum is visited by **250,000** people

INTERNATIONAL CONGRESS CENTRE IN KATOWICE

- EU contribution: **€ 34.86M**
- opened to the public in **March 2015**
- post-industrial aesthetic (wood, glass and steel)
- yearly, the ICC hosts ca. **200 events** with over **500,000 visitors**
- international cultural (music, sport) and business events, such as: World Climate Summit COP24, Intel Extreme Masters, Tauron New Music Festival

KSSENON BUSINESS ACCELERATOR IN ŻORY

- The aaccelerator serves small and medium businesses with production and office space.
- It is also a training center for students to learn vocational skills.
- Ultimately, the accelerator is to become a home for 56 companies, and a workplace for over 500 people.
- EU contribution: **€ 9M**

REGIONAL OBSERVATORY O TRANSITION PROCESS (ROPT)

- "Regional Observatory of the Transition Process (ROTP)" was launched to support the management of the socio-economic transition process, including in particular strengthening dialogue towards mitigating the effects of mine closures and the process of economic change towards a green digital economy.
- Besides research and publications (8 reports, 4 brochures, a strategic summary), there were 6 innovation workshops hosting 113 participants, 6 seminars to identify tools for effective transition with 219 participants and 8 local economic development workshops with 298 participants.
- 2 study visits and a database of transition process stakeholders set up.
- EU contribution: **€ 0,33M**

OPI TPP 2.0

- The aim of the project was to develop and implement a new e-service in the form of a publicly available information system about post-mining areas in the Silesian Voivodeship.

- The scope of information and tools made available is dedicated to help assess the potential for re-using these areas for economic and social purposes.

- EU contribution: **€ 1,3M**

Fundusze Europejskie

JTF STRATEGIC PROJECTS - EXAMPLES

GAMING AND TECHNOLOGY HUB

EU contribution: **€ 67.41M**

Revitalization of post-mining areas for the purpose of creating a center for the development of the gaming industry.

The Hub will include, among others: laboratories, recording studios, e-sports production studios, and film/TV studios.

7 facilities made available for re-use for economic purposes, 7.8 hectares of reclaimed land.

GREEN ECONOMY HUB IN TYCHY

- EU contribution: **€ 22.34M**

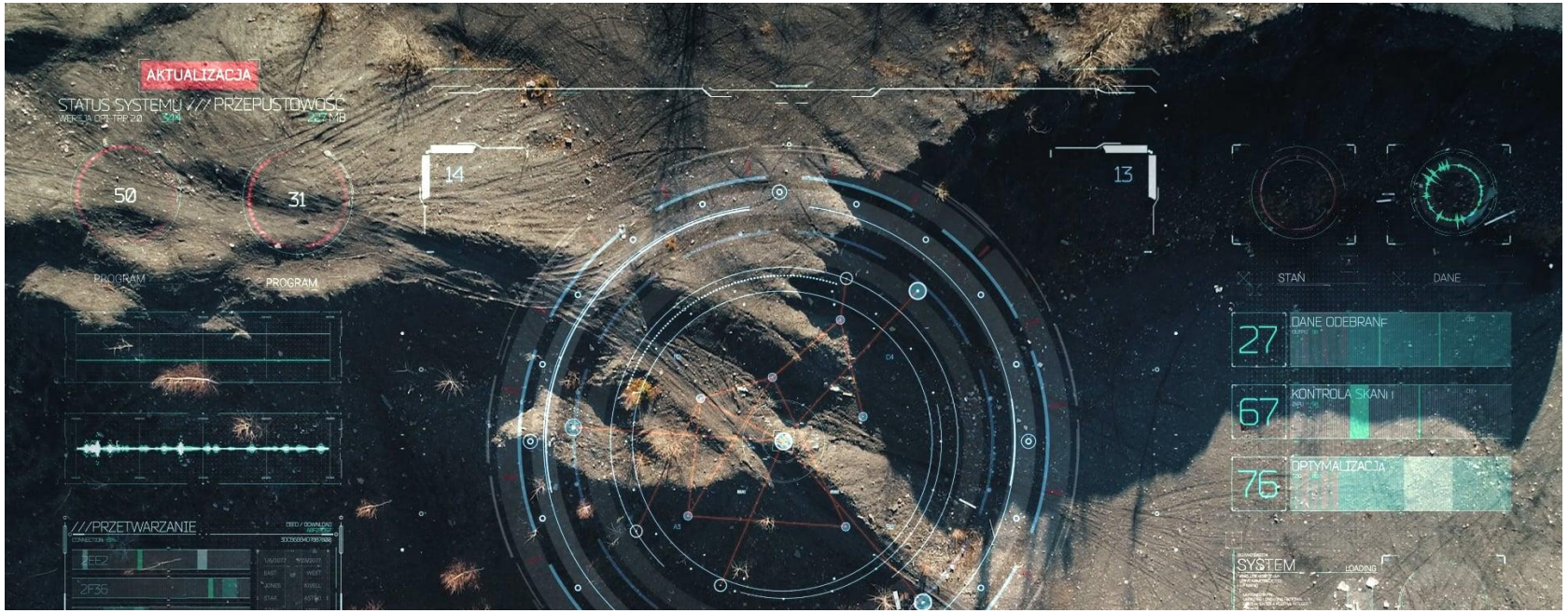
- The project assumes the adaptation of a degraded, post-industrial facility to house an entrepreneurship development center to support start-ups and SMEs ready to change its business profile to green economy solutions.

- It will also house a Professional Competence Center to suport workers affected by the transition effects, as well as an information and advisory center for residents in the field of renewable energy sources and blue-green energy. infrastructure.

REHABILITATION OF POST MINING LAND KAZIMIERZ IN SOSNOWIEC

- EU contribution: **€ 22.34M**
- Business accelerator
- Kindergarden
- Nursery

BESKIDZKI HUB – CENTER FOR DIGITAL INNOVATION AND MODERNTECHNOLOGIES IN BIELSKO-BIAŁA



- EU contribution: **€ 29.91M**

- Beskidzki HUB project assumes creation of the Center for Digital Innovation and Modern Technologies together with local business incubators and support for start-up companies (Regional Development Agency)

- The Center will be an educational center, an R&D center for the development of Industry 4.0 technologies and the so-called a one-stop shop for all enterprises from the region looking for new technologies.

Regional Development and Transition Department
Marshal's Office of the Silesian Voivodeship

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Thank you for attention!

Fundusze Europejskie dla Śląskiego
Rzeczpospolita Polska
Dofinansowane przez Unię Europejską
Województwo Śląskie

Questions for our panelists?

Please share your questions in Q & A

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